



By email to irc2@cru.ie

James Enright
Manager - Water
Commission for Regulation of Utilities
The Exchange
Belgard Square North
Tallaght
Dublin 24

2nd July 2018

Re: Consultation on Irish Water Revenue Control 2019

Dear Mr. Enright,

The Environmental Protection Agency (EPA) has reviewed the CRU's consultation paper on Irish Water Revenue Control 2019, and welcomes the opportunity to comment. We understand this proposal is a one-year extension to Interim Revenue Control 2 (IRC2) which covers the period 2017 to 2018. We previously provided comments in November 2016 as part of the IRC2 consultation process, many of which are still relevant and should also be considered by the CRU in their decision-making process. These comments are attached as an appendix to this submission.

Having reviewed the consultation paper, the EPA has the following comments:

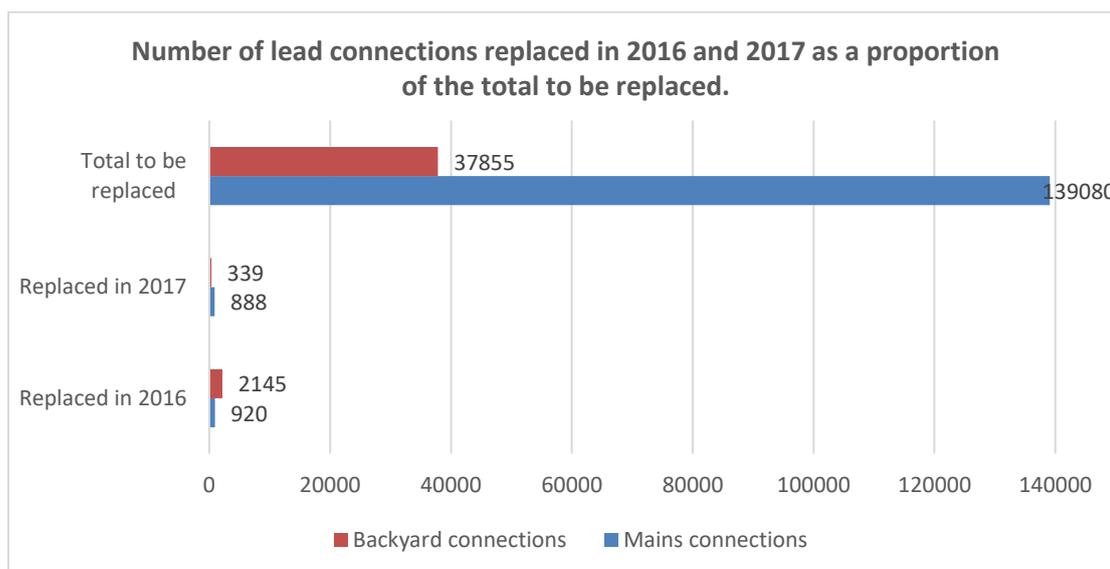
Drinking Water:

The EPA recently published the [Drinking Water Report for Public Water Supplies 2017](#) which identified the following as the most important issues which should be addressed on a national level to protect and improve public drinking water supplies:

- Keep water free of harmful bacteria (disinfection);
- Minimise harmful disinfection by-products (trihalomethanes);
- Eliminate lead from our water pipes;
- Prevent pesticides from entering our waters;
- Manage risks to our public water supplies; and
- Ensure all water treatment plants are effective.

There are currently 72 supplies on the EPA's Remedial Action List (RAL) where improvements are needed to ensure the safety and security of these supplies. According to the most recent RAL update in Q1 2018, our understanding is that 21 of these supplies are due to have works completed in 2019, with a further 12 supplies to be completed in 2020. This does not match the figure identified in *IW follow up note on 2019 costs 29 May 2018* which states that critical works are required to remove 9 supplies from the RAL. It is important that investment is targeted at the RAL supplies and the EPA will oversee Irish Water's performance to ensure they deliver the expected 21 upgrades to RAL supplies in 2019.

The EPA has identified the elimination of lead pipework as one of the national priorities for drinking water. The *IW follow up note on 2019 costs 29 May 2018* seeks €2m revenue for lead compliance to undertake orthophosphate treatment and pH adjustment to address public health risks relating to drinking water. However, there is no mention of expenditure on works to replace lead pipework and connections, which is the preferred solution to eliminate lead in drinking water. We know that only a very small number of lead pipes and connections were replaced in the past two years (see graph below from the [Drinking Water Report for Public Water Supplies 2017](#)), and no lead services were replaced in Q1 2018. The EPA is concerned at the low numbers of replacements given Irish Water’s target date of 2026 for the removal of all lead pipework within the public network. Furthermore, the indications are that the proposed revision of the EU Drinking Water Directive will result in a reduction of the lead standard from 10 µg/l to 5 µg/l, which will not be achieved by orthophosphate dosing and pH adjustment. Therefore, it is crucial that Irish Water targets investment towards the replacement of lead connection to improve the pace of replacements to meet the 2026 target date.



Waste Water:

The EPA has identified the following as the most important environmental issues where Irish Water should target its resources in 2019.

- Ensure waste water from large agglomerations is collected and treated to the standards in the Urban Waste Water Treatment Directive.
- Eliminate discharges of untreated waste water.
- Prevent pollution by inadequately treated waste water and ensure that discharges do not prevent receiving waters from meeting their environmental objectives.
- Ensure that waste water discharges do not contribute to poor quality bathing waters.
- Carry out improvements where they are needed to protect freshwater pearl mussels and shellfish.

The EPA has provided Irish Water with a list of sites where improvements are needed to address these priorities, and we would like to see investment targeted at these areas.

The EPA recognises the need to improve sludge management and source control and to deal with additional responsibilities involved in taking in charge of waste water works serving residential estates. The investment in these areas is welcome. However, we note a discrepancy in the sludge figures identified by Irish Water; the *Interim Revenue Control 2 Rollover Submission for 2019 costs* states there are c. 60k tonnes of wastewater sludge generated by IW assets every year, whereas the *IW follow up note on 2019 costs 29 May 2018* states there is c. 60k tonnes of water and wastewater

sludge generated by IW assets every year. We believe the 60k tonnes refers to wastewater sludge only, but this figure and associated expenditure should be clarified with Irish Water.

The report refers to 43 locations across Ireland where waste water is released back into the environment without treatment. The EPA's report on Urban Waste Water Treatment, published in 2017, identifies 44 areas discharging raw sewage.

It would be useful to have a list of the sites allocated capital investment, the capital works to be carried out, the reason for these works and the estimated timeframe to complete the works. Indicators and metrics could then be used to track and monitor progress at delivering these works.

I trust these comments will assist the CER in finalising its decision. If you would like to discuss any aspect of the above, please don't hesitate to call me on 01 2680100.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Darragh Page'.

Darragh Page
Programme Manager
Office of Environmental Enforcement



By Email

Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght
Dublin 24

14th November 2016

Re: Consultation on Irish Water Revenue for 2017 to 2018

Dear Sir/Madam,

The Environmental Protection Agency (EPA) has reviewed the CER's consultation paper on Irish Water's allowed revenue for 2017 to 2018 and welcomes the opportunity to provide comments on the proposals. In February 2016, the EPA provided comments to Irish Water on their draft Investment Plan 2017 – 2021, which are still relevant and should be also considered by the CER in their decision making process. These comments are attached as an appendix to this submission.

Having reviewed the consultation paper on the second revenue control period, the EPA has the following comments:

Water Infrastructure Investment

The EPA supports the need for sustained investment in water infrastructure in order to improve the quality and security of our public water and waste water services and to achieve compliance with environmental legislation. The EPA has currently identified 108 "at risk" drinking water supplies and 130 priority waste water agglomerations where remedial actions and investment is urgently needed. The graph in Figure 5.1 shows capital investment in water and waste water projects declining from 2019 to 2021. Irish Water should be allowed sufficient revenue to deliver the improvement works necessary to deal with drinking water remedial actions and priority waste water specified improvement works.

Review of Irish Water's performance under IRC1

The paper indicates that Irish Water has broadly met its targets under IRC1 but yet there is reference to projects being deferred and underspend on capital maintenance. The EPA has noted some considerable slippage in the delivery of key infrastructural projects. Any infrastructural delays and underspend on maintenance are matters of significant concern and should not endure under IRC2.

The paper refers to improvements made by Irish Water under IRC1 in relation to boil water notices. While there are currently 16 boil water notices in place affecting c. 7000 people, so far this year over 86,000 people have been placed on boil water notices, which is more than twice as many as 2015. This demonstrates the level of failure throughout the past year and highlights the need for remedial works at the 108 identified "at risk" water supplies in order to eliminate the threat of further water restrictions.

Monitoring of Capital Investment Plan

Monitoring programmes need to be established to measure Irish Water's progress in implementing the capital projects and national programmes under the CIP. Performance measurement should be based on a combination of the efficient use of funds and progress on infrastructure works to address environmental outcomes. The EPA has noted considerable slippage in the delivery of key wastewater infrastructural projects. Monitoring of infrastructural projects at priority waste water agglomerations and the drinking water supplies on the EPA's Remedial Action List should be included in the monitoring programme.

Irish Water's Proposed Investment Targets for the period 2017 – 2018

Table 5.6 outlines the Investment plan targets and expected outcomes for drinking water and wastewater. The EPA makes the following comments on these targets:

- For boil water notices, 30 days should be used as the criteria to differentiate between long-term and short-term boil water notices. This is in line with Article 9(4) of Council Directive 98/83/EC on the Quality of Water Intended for Human Consumption, which makes it clear that trivial non-compliances are expected to be resolved within 30 days.
- The CIP target for the number of schemes on the EPA's Remedial Action List (RAL) is zero by 2021, yet the final column shows an expected outcome of 9 supplies on the RAL by end 2021 (those relating to the Vartry Scheme). This contradicts Irish Water's commitment to the EPA that the upgrade of Vartry water treatment plant and Callowhill pipeline (including decommissioning of Callowhill tunnel) will be completed by the end of 2020.
- The European Commission has commenced pilot infringement proceedings against Ireland for THM exceedances in public water supplies. There are currently 73 supplies on the RAL for elevated levels of THMs where action programmes have been identified by Irish Water and targeted investment is needed to achieve compliance.
- The targets for lead compliance and removing lead services from distribution networks are not ambitious enough:
 - The EPA expects to see sustained improvement towards 100% lead compliance (rather than 98% as listed in the table) over the period to 2021.
 - The CIP target for the number of common lead shared service pipes is to reduce from c. 40,000 to zero, yet the final column shows an expected outcome of 25,000 by 2021.
 - The CIP target for the number of individual lead pipes in the network is to reduce from c. 140,000 to 50,000, yet the final column shows an expected outcome of 120,000 by 2021.
- The EPA has identified waste water agglomerations where increased investment will achieve positive environmental outcomes. In addition to the targets provided, the CIP 2017 to 2021 should reflect the EPA waste water priority criteria including discharges linked to poor bathing water quality, water pollution and discharges requiring works to protect pearl mussel and shellfish waters. Investment in wastewater should be targeted at the areas where it is most needed.
- There is a current EU Infringement case against Ireland for failing to comply with the requirements of the Urban Waste Water Treatment Directive. The CIP expenditure should focus on achieving 100% compliance with the Directive at waste water treatment plants by 2021. The EPA is aware that network compliance will take longer than 2021 to achieve.

- All waste water agglomerations with no treatment should be eliminated by 2021. Information provided to the EPA identifies that 31 agglomerations will be discharging raw sewage by 2018 compared to 20 identified in the table.
- Irish Water states that the nutrient removal requirements specified in EPA Waste Water Discharge Licences are driving increased operational costs which are significantly higher than UK comparators. These requirements are based on the ability of the receiving waters to assimilate the waste water discharge, and are necessary in order to comply with the Urban Waste Water Treatment Directive and the Water Framework Directive. Sufficient funding should be made available to deliver the improvement works necessary to comply with EPA Waste Water Discharge Licences.

National Programmes

The EPA would like to see greater detail on what is included in the national programmes and to have an opportunity to input to the content and focus of these programmes.

The recently published *Drinking Water Report for Public Water Supplies 2015* highlights that pesticides (specifically the herbicide MCPA), has emerged as a significant water quality issue in recent years. In 2015, Irish Water notified the EPA of 61 water supplies that detected pesticide non-compliances, a significant increase on 28 supplies in the previous year. Given the scale of the problem, it may not be possible to resolve all such non-compliances with source protection measures in the catchments. Under IRC2, Irish Water should include provision for capital works and a national programme addressing supplies with persistent pesticides non-compliances.

The EPA supports and welcomes Irish Water's initiatives to regularise compliance issues including an out-of-hours service, standard operating procedures and an expanded lead monitoring programme.

I trust these comments will assist the CER in finalising its decision. If you would like to discuss any aspect of the above, please don't hesitate to call me on 01 2680100.

Yours sincerely,



David Flynn
Programme Manager
Office of Environmental Enforcement

Appendix 2: EPA comments on draft Irish Water Investment Plan 2017-2021

Mr. Padraic Fogarty,
Post Investment Review Lead,
Irish Water,
24-26 Colvill House,
Talbot Street,
Dublin 1.

9th February 2016

EPA comments on the draft Irish Water Investment Plan 2017-2021

Dear Mr. Fogarty,

The Environmental Protection Agency (EPA) welcomes the opportunity to comment on the draft **Irish Water Investment Plan 2017-2021** ahead of the Second Interim Revenue Control Period submission to the Commission for Energy Regulation (CER). The EPA welcomes the approach taken by Irish Water in providing for significant investment in capital projects and national programmes. The EPA will also comment on the finalised investment plan at the time of the CER's consultation later in 2016. In the finalised plan, the EPA will be seeking information on how each project listed addresses the improvement works necessary to deal with drinking water remedial actions and priority waste water specified improvement works.

Having reviewed the draft Irish Water Investment Plan 2017-2021 the EPA has the following comments:

- The EPA publishes annual reports on Drinking Water Quality, Urban Waste Water and Bathing Water Quality. Irish Water should have regard to the recommendations of these annual reports in the drafting of the final plan.
- The investment plan should prioritise investment in plants that are on the EPA Remedial Action List and agglomerations identified by the EPA as priorities for waste water enforcement. Plans should be in place for all listed supplies and agglomerations to address the deficiencies identified within the period of the investment plan.
- The level and pace of investment needs to be accelerated to deal with the current deficiencies, risks and to make up for the historical deficit in underinvestment in Ireland's water services infrastructure. Investment in the longer term needs to be at a sustainable level.
- Irish Water should make provision for sustainability-based, applied research aimed at fostering water-technology innovation. In particular, Irish Water should aim to deploy novel techniques and technology to improve performance at smaller water supplies and small scale waste water treatment plants (sub 500 PE).

Drinking Water

- Table 10 of the draft Plan includes indicators for drinking water;
 - In relation to the drinking water indicators Irish Water has stated that the target for boil water notices is 0 with the exception of boil water notices in place less than 200 days. The EPA considers that the target should be no more long term boil water notices due to infrastructural deficits (e.g. no *Cryptosporidium* barriers) and that any boil water notice in place more than 30 days to be a more appropriate target. This is in line with the definition of a trivial exceedance in the Drinking Water Directive. By way of example, using the 200 days definition the *Cryptosporidium* outbreak in Galway in 2007 would not be included (it lasted 158 days).
 - The target for THM compliance by 2021 is listed as 93%. This is not an appropriate target as the current level of compliance as reported in the *Drinking Water Report 2014* is 93%. The EPA will expect to see sustained and significant improvement towards 100% compliance over the period to 2021.
 - The target for lead compliance by 2021 is listed as 98%. This is not an appropriate target as the current level of compliance as reported in the *Drinking Water Report 2014* is 98.2%.
- The EPA fully supports the inclusion of source protection in the list of national programmes in the context of microbiological, nutrient and pesticide reduction. However, there does not appear to be any funding allocation for capital works to address pesticides issues. Given the scale of the problem (pesticide exceedances were notified to the EPA in 55 public water supplies in 2015) it is unlikely that it will be possible to resolve all such non-compliances with source protection measures. Irish Water ought to include a significant provision for capital works and a national programme addressing supplies with persistent pesticide non-compliances.
- The EPA supports Irish Water's approach to the prudent rationalisation of drinking water supplies. However, the appropriate balance ought to be struck between the short term risk of non-compliance and the long term improvement under the investment plan. Where rationalisation will not deliver sufficient quality improvements in the short term, Irish Water will need to invest, to ensure that the quality of water supplied to consumers in the interim is adequate.
- In the context of rationalisation, there is considerable scope for asset redeployment. This is particular relevant in the context of disinfection systems and potentially pesticide treatment (e.g. ozone treatment currently located in sub-optimal settings). Irish Water should take a strategic approach to the management of redeployed assets and should highlight efficiencies that can be gained by such redeployment.

Waste Water

- The section on Managing Waste Water refers to non-compliance with the Urban Waste Water Directive requirements identified in the 2013 EPA waste water report. This should be updated to reflect the latest information published in the EPA's report on 'Urban Waste Water Treatment in 2014'.
- The risks and outputs/targets in the plan should provide reference to all of the EPA waste water priority criteria such as agglomerations that failed the mandatory effluent quality or infrastructure requirements in the Urban Waste Water Directive; discharges linked with water pollution or bathing water failures; discharges requiring improvement works to protect freshwater pearl mussels or shellfish waters.

- Consideration should be given to addressing plants and networks that are currently overloaded when considering expansion of plants or networks for modelled growth. Plants and networks should be capable of catering for seasonal variations and peak loads.
- Network needs and outputs/targets should take into account waste water discharge authorisation requirements in relation to network assessments, improvements and upgrades.
- The plan should have regard to the need for capital investment at smaller urban areas (i.e. less than 500 PE) that are subject to Certificates of Authorisation and should address environmental risks (such as risk to WFD status) and issues associated with discharges from such areas.
- The following information should be provided for the waste water projects in Appendix B:
 - Details of the EPA's Specified Improvement Programmes to be addressed by these works.
 - Details of the treatment plants that will achieve Directive compliance and licence compliance and the dates that compliance will be achieved.
 - Timelines for the estimated completion of the works.
 - Where a single project covers more than one agglomeration, details should be provided on the works to be carried out at each agglomeration.
- The investment plan should make provision to deal with the acceptance of sludge from individual treatment systems, such septic tank sludge.

List of Investment Projects

- It is not clear from reading Appendix B whether the List of Indicative Projects includes all schemes on the Remedial Action List or all agglomerations identified by the EPA as priorities for waste water enforcement. The final plan should include a greater level of detail to allow the EPA, and others, to clearly link the project names listed in the plan to the schemes where there is an identified need for improvement or remedial works.

I trust these comments will assist you in finalising the investment plan ahead of the planned submission to the CER.

Yours sincerely,



David Flynn
Programme Manager, Office of Environmental Enforcement